771
775 Man was higher on the scale than woman.[20] Progress toward
[562] Nippan was not assured but had to be earned. With sinful behavior a person might be catapulted back to being a beast. He who stole would "be born and die 500 times before he could even grow up." Almost everyone had to be sent to purgatory
[776] where demons carried on tortures until he had suffered enough to be released for rebirth. The evil spirits (phī) that wandered frighteningly in Bang Chan were part of the legions whose job was to increase deserved suffering on this earth.

771 The people of Bang Chan felt they could discern even
782 of themselves who was meritful and who was not according to
828 human circumstances, constitution, and behavior. A meritorious person was healthy, happy, and successful in all undertakings. He enjoyed good health and long life, a kindly personality, many fine children, wealth, high status, intelligence, and luck. Astrologically, he was born on a day
[775] of good confluences, of gold and auspicious signs. He who lacked merit, because of sins committed perhaps many ages ago, was born on an unfortunate day. He suffered early death, deformities, unhappiness, poverty, and had a cruel nature.
[153] Illness, whether supernatural or natural, whether induced by wind or sorcery or what, struck as part of the suffering brought on by former sin. It was accepted in the conviction that whoever suffered had brought it on himself. When merit ran out, or when sin cancelled out and then exceeded one's merit, suffering and premature death occurred, despite all human efforts. Because of the prevalence of illness and of life's difficulties, major and minor, no one, no matter how outwardly fortunate and so evidently meritorious, had at this earthly level of existence enough merit to escape some suffering and frustration. By the same token, though, no person was without hope. By making merit or by suffering in this life, existence would be happier in the next. The making of merit was in the forefront of daily conscious effort and even conversations of the people of Bang Chan.

• 751 The long-range protection against all illness was to
789 live virtuously and make merit. However, to guard against
[547] temporary supernatural intrusions, everyone possessed and
[782] usually wore Buddha lockets and other amulets. Some
[304] underwent tatooing, men having Cambodian or other figures, women, 2 small dots tatooed on the torso under the arm.

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20. Men had achieved greater "other-worldliness" while women were more bound by the phenomena of the flesh (cf. Kirsch, 1961).

843 [775] She might also be troubled by the ghost of anyone who had died violently. This ghost, a phi tai thang klom, caused "the worst of all possible deaths." The phi krasu spirit,[25] entering through her anus, also might cause death by consuming her faeces, organs or the child's entrails. It was more dangerous during and after childbirth than during pregnancy (Textor:304-320). [753] The supernatural disease missile called "khun" might also strike. "If the mother is under 9 months pregnant, the baby inside can protect (itself). If this happens during the ninth month, the doctor uses holy water to extract it at the time of birth." Khun was recognized by "extra pain occurring just before the baby comes out." To protect themselves, women wore extra talismans or had 2 dots tattooed under the arm. [751] [304]

843 845 There was no assumption that what was born was inevitably to be human. When people said of a woman who had died pregnant, "the child ate the mother;" or, at a miscarriage, "the mother ate her child," or if many of a couple's children died, "they eat their children," the charge might be merely the comment of a vituperous neighbor, but the reality of vicious, autonomous beings, human or otherwise, in the womb was unmistakable. A certain woman died pregnant. The fetus, removed surgically, was observed to have 2 visible teeth, which indicated it was a non-human, yak (giant). However, a child might also be the soul of an angel in the form of a falling star that entered the womb in the advanced stages of pregnancy. "If such a baby lives it is pure and is a very wonderful child." Episodes were described of women giving birth to "gold," "jewels," "a monkey," "a fish's stomach," and a mouse-like "Golden Child." Sometimes these

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[771] [783] [514] [262] 25. This spirit ate like a dog, not like a human being, in eating faeces and putrid meat (McF.46). No revulsion nor idea of filth and contamination was found in Bang Chan's attitudes about faeces or urine. The infant in the womb sat peaceably on the mother's faeces. It was lucky to dream of faeces. In daily life human and animal excretions, like sins at the festival of Loy Krataung, were carried away by the canal waters. Bang Chan Buddhists recognized a need for cleansing, but not for purification. Since neither faeces nor sins were filthy the water was not contaminated. Even putrid meat was not disgusting in the context of the perishability of the flesh, but as food it was revolting. Muslims, however, had built in contamination to their concept of sin, so required purification.

Lek watched over the baby, while Sâi turned towards DÛan. "One looks to the mother first, unless the baby needs help more." First Sâi gave DÛan medicine for the placenta. She rubbed her hands with alum and tried unsuccessfully to work down (klôm) the slippery placenta. Then she told DÛan to get on her hands and knees, and exert all the force she could. DÛan crept around the floor but it still did not come. Sâi then tried hitting DÛan's back 3 times with DÛan's own pillow. Finally she gave DÛan a leaf of betel pepper to chew, hoping to induce a wind-producing nausea and so push out the placenta. In the end DÛan resumed her sitting position and it was pressed out. So the baby would not get pimples, the placenta was cleaned carefully, then put into an old pot, mixed with 7 dishes of salt, and set aside.

While Lek sewed up the partially completed cushion, Sâi laid the baby along her legs, and washed him with soap. Sometimes she washed the baby before the cord was cut, if the placenta came quickly. She used salt to remove the greasy fat from his body, though would have preferred "fermented tamarind to protect him from pustules that enlarge to sores (rók phumphóng)." "Soft tissue like a stomach covering his head! What a good sign of progress and fortune!" she exclaimed. She powdered him with face powder (dinsôphóng), and painted his abdomen with turmeric,[34] "so wind will not make him cry." Covering him with a little piece of old cloth, she laid him on Lek's old winnowing tray (kradong).

It was the moment to winnow (rôn) the baby, and link it to home and family. While Lek got the holy unsun cord, others placed on the tray with the baby all manner of traditional things to influence the progress and well-being of the child during his lifetime. Sâi put on the phlai, the clod of soil, and the tapered bamboo she had used to cut the cord "because they will never be used again," but actually these things had a far deeper meaning to all present. Song laid on a school exercise book and pencil, so that his son would have knowledge and a good memory. Mî got a needle for sharp wit. If the baby had been a girl, the needle would have given sewing skills. When all was in readiness, DÛan had to decide on the ones to raise the child aloft, catch the tray as it was dropped, and bless him as the holy thread was tied on. She had to choose these persons carefully, for the child

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34. Other mixtures (used also on the mother) were lime-bergamot lemon; or phlai (if possible the one on which the cord was cut), wînnan (acorus calamus) (Textor:84-86) and nahâthing (asafoetida) with burned betel leaf. These were all to keep out wind.

the priests had finished[1]. The trays of food from which each guest served himself were bountiful, but it was not proper to eat very heartily, lest the host suffer the shame of running out of food. If there were a dramatic show or movie at night it was open to the public. In one case 2000 people attended. At that time eight commercial venders turned up to sell coffee, soft drinks, ices and other foods. Venders came to every large ceremony, and were heavily patronized. At the end of a (1)ngaan, the sponsors felt satisfaction and security. Where there was plenty of food to take home, the success was even greater. An earthy compliment was, "the fields were full of feces."

In addition to the banquet were ceremonial offerings of food to spirits and ritual food sometimes consumed as a sacrament. For each ceremony, appropriate selections were made from a specific list: a cooked pig's head, or at least a slice of cooked pork; two kinds of sweetmeats, red ((2)kha-(5)nom (3)tom (1)dzeeseng) and white ((2)kha-(5)nom (3)tom (5)khaaw); a cooked fish, usually (1)plaa (3)chaauun, with its head and tail; a green coconut with its coconut water; a bunch of bananas either of the (3)kluaj (4)nam-(4)waa or (3)kluaj (4)nam varieties; a hard-boiled egg, usually duck; and liquor.[2] Other kinds of sweets, fruit, sugar cane, items for betel chewing, chicken, salt, and rice might appear. As these ceremonies were thought to be auspicious, purifying, therapeutic and protective, they were most elaborate at the great (1)tham-(1)khwan (soul-strengthening) ceremony, at house-raisings and at rites to local guardian spirits. The necessity of these ceremonies explains why when public structures were raised, a portion of the public funds were used for a repast. In Bang Chan when donations for a new school

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1. Other priorities in service might be observed; for example, at a celebration preceding ordination the priest-candidates were served next. At one small affair, when 11 priests came to a home to conduct a service for a disabled old man who could not go to the temple, this elder was served after the priests, then the research group who counted as visiting dignitaries, and finally the other family members, with the women who prepared the food, and the children, eating last. The general sequence prescribed by etiquette was: priests should be served before anyone else, old before the young, the males before females, persons with high status such as teachers and ceremonialists before low, urban before rural. Those who cooked and served came last of all. When the number of participants was large, guests might be served, as they arrived, over a period of hours.

2. The presence of meat, fish and alcohol in this ceremonial food reflected non-Buddhist elements in Thai culture, and should not be viewed as a gross violation of Buddhist precepts.

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One other aspect of (l)ngaan which should be mentioned
952 in connection with food and health is the opportunity for con-
796 tamination of food. The villagers did not associate sanitation
• 751 with health, hence the hazards of a community meal which many
751 persons helped to prepare were many. Two incidents observed the day before an ordination in early April, will illustrate. In the final stage of making Chinese noodles, rice flour paste was extruded through a perforated disk into an enormous pot of boiling water. When done, the product was removed with a fish net, and plunged into the canal to cool, after which women helpers spread it out on banana-leaf covered trays. Dishes were also washed before use in the canal, which was then too low for boats. Since, however, many people drank untreated canal water at this season (see p. 28), the added hazards for the participants caused by these procedures may have been slight.

262 In summary, food plays a major role in ceremonies and
792 festivities, which are concentrated in the 3 months' dry season. Proposals for dietary improvement in Bang Chan must take into account not only the possible effects of the (l)ngaan season on the total nutrient intake, and on opportunity for exposure to contaminated food, but also the importance of these affairs from the standpoint of merit and prestige, and the relatively great financial burdens which villagers therefore undertake because of them.

QUANTITATIVE DIETARY STUDY: FOODS EATEN AND ESTIMATED NUTRIENT INTAKE OF SELECTED FAMILIES IN BANG CHAN

Procedure

121 Selection of the Sample
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Medical inspection designed primarily to discover possible signs of nutritional deficiency was carried out in advance of the family dietary study. The suggestion of Grant (1948) that matched groups, of contrasting economic or other status be studied, appeared to be appropriate to the situation in Bang Chan. Our hope was to be able to select from the random sample of families given medical inspection (Hauck, 1956) a group of families (A) in each of which several members had clinical signs which might be evidence of malnutrition, and a group of families similar in age and sex distribution (B) in each of which the members were largely or wholly free from such signs.

125 When the medical inspection of the random sample was
146 complete, however, too few of the families were found to meet our criteria for inclusion in Group A, i.e. the group of apparently less well nourished families. Additional families for

854 278 medications were taken internally, sometimes being painted on the tongue with a feather; but two preparations were applied over the abdomen. Some of the medications were described as "stomach medicine" or "to prevent flatulence." Five different kinds of proprietary medicine were given to 18 infants. In 13 instances, the medicine given was clearly homemade and included as major ingredients items such as flattery fruit, (3)luug (1)yauau; cobra oil; horseshoe crab; and buffalo skin. The nature of the medicine, whether homemade or proprietary, was not clear in 8 instances. Usually medicine for infants was mixed with honey, but in 2 cases, alcoholic liquor was used as it customarily was for the mother.

Six newborn infants in this series were given no medicine. One of these was born at the Health Center. One of the other 2 infants delivered at the Health Center was given homemade medicine later, and no information was obtained on the third. Eye prophylaxis[1] was probably routine at the Health Center, as, in 2 of the 3 cases delivered there, informants knew that drops had been put in the infant's eyes. Traditional midwives, however, did nothing of this sort.

Water for Drinking and Bathing.

853 312 For the newborn infant as well as for the mother, water for drinking and bathing was boiled and was usually used while hot, often being kept warm in a vacuum bottle. Either rain water or canal water might be used depending on what was available at a given season. The water was dribbled from an adult's fingers into the infant's mouth. When the mother was no longer lying by the fire, boiled water was not considered essential for the infant. Nevertheless, over half the infants seen from this time up to 3 months of age were being given boiled water to drink. After 6 months of age this was rare.

853 855 312 In one instance, during the time when a younger sibling received boiled canal water, a 21-month old child was given boiled water also. At the time of a later visit both of these children were drinking unboiled canal water. In another case an orphaned boy's formula was made up with boiled water, although

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[744] [751] [731] 1. Vaccination for smallpox was the only modern preventive treatment which we knew to be used in Bang Chan in the absence of an epidemic. Since a severe epidemic of smallpox with many deaths ten years previously, health officers came to the Bang Chan elementary school once a year to vaccinate children, and other residents of the community could be vaccinated at this time. Four of the young children whom we visited periodically were vaccinated, at 4 months, 8 months, 1 and 2 years of age, respectively.

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14 observed in 9% of the school children 7 to 14 years of age who were examined, and in about 6% of the males and 25% of the females over 15 years of age. Of 337 persons examined, however, 2 only, one child and one adult female, were found to have hemoglobin values under 9.75 g per 100 ml.

744 Modern sanitation was practically unknown in Bang Chan. Few families had covered pit latrines or made any effort to 514 cover excreta. Intestinal parasitism was common. Garbage 164 might be fed to animals, but was frequently thrown into the 364 canal or elsewhere about the compound. Provisions for protecting foods from contamination were meager.

When rain water was available, it was used for drinking, but several months each year water from the canals or fish ponds was used without prior treatment. For washing vegetables, cooking and washing dishes, canal and pond water was used throughout the year.

744 A few changes in sanitary practices, if they could be brought about, might reduce some kinds of illness substan- 751 tially. For example, if the villagers would adopt the practice of boiling pond or canal water whenever it is to be used for drinking, contamination from this source would be materially reduced.

Use of boiled water for bathing babies and all persons with abrasions or open wounds would probably reduce the incidence of skin infections, and enable those which do occur to heal more quickly.

Infantile tetanus could be largely if not entirely prevented if the local midwives were taught to use sterile scissors for cutting the cord, and to avoid contact of the cord with soil.

758 Modern medicine will probably not be readily or generally available to a majority of the residents of Bang 121 Chan for many years to come. The first step toward better health in a village such as Bang Chan appears to be to teach the people, through their local leaders and practitioners, to adopt improved health practices. To be effective, such teaching must be based not only on a knowledge of what the people do, but on an understanding of the way they think and feel about customary practices.

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757 to a second-class doctor in Minburi, then to a nearby Muslim
759 masseuse, then to a local traditional practitioner who gave her some jaa tom (cooked medicine). Another instance, recorded in the field notes, is that of a school teacher's baby who had abscesses on her head. The mother took her child first to Minburi, where she was given an injection and a sulfa drug to be taken orally. The child did not get well immediately, and before all of the drug had been taken, the mother took the child to a local traditional practitioner who gave her a decoction of herbs which was to be given by mouth. Thus in some cases, modern doctors were consulted first, and local traditional practitioners later, if relief was not as speedy as was expected. The experience in this one hamlet suggested a willingness to try a variety of treatments, and the existence of a considerable degree of confidence in modern medicine.

758 According to Ralis (1955), 213 of 335 household repre-
743 sentatives interviewed had visited a clinic or hospital. Of these, 156 had gone to Minburi, and 135 to hospitals or clinics in Bangkok, some having gone to both places. Of 258 hospital or clinic visits, 125 were for treatment or hospitalization; the bulk of the rest were to accompany patients or to visit hospitalized relatives or friends. No significant difference in reports about seeking treatment or hospitalization was found between groups of persons differing in literacy, or in socio-economic level.

144 Infectious disease. - The principal evidences of infectious disease noted in the course of the clinical examination for assessment of nutritional status were trachoma and smallpox scars. Occasional cases of ringworm and other fungus infection, and of pediculosis were observed by the physician.

When the 233 school children and 148 additional persons included in the random sample of village households are considered together, i.e. a total of 381 persons or more than one-fifth of the total population of the village, only 3% were found to have trachoma. Eleven of 13 cases found were among 237 children 7 to 14 years of age, i.e. an incidence for this group of 4.6%. Zimmerman (1931) reported 119 cases or 4.3% of all persons examined in Central Thailand, and 277 cases or 2.9% of persons examined in the whole Kingdom. Among the school children examined, however, he reported an incidence of 12.6%.

Of 381 persons examined in Bang Chan, only 10, or fewer than 3% had smallpox scars. Two cases only were in adults, the remaining 8 being among children of school age. Our records do not show when the most recent cases occurred in the village.
• 751 According to Zimmerman (1931), 88% of over 2200 school children examined had been vaccinated. No information was obtained concerning the proportion of residents of Bang Chan who had been

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751 vaccinated but among school children the percentage is very high. During the survey period a health officer came to the Bang Chan elementary school to vaccinate children; and at that time at least one nearby resident, a school teacher's wife, brought her infant for vaccination.

164 Illnesses probably, in most cases certainly, of infectious origin, which were mentioned in the field notes, include the following, which are listed roughly in the order of frequency: skin disorders such as abscesses and boils, fever, respiratory disorders including colds and influenza, tuberculosis, "upset stomach," measles and diphtheria. Two cases of diphtheria with one death, occurred while the survey was in [744] progress. At this time health authorities came to the village to inoculate the children on a voluntary basis (Hanks et al. 1955). As already noted, malaria and typhoid (one case each), were mentioned as occurring during the year previous to the inquiry in Hamlet KY-7 (Hanks, 1954).

[759] [743] A number of references were made to history of cholera, smallpox and malaria, but these did not appear to be current threats. Two cases of severe diarrhea were called "cholera" but one was on the way to recovery the next day. The traditional practitioner who was asked to treat the other, urged that she be taken to the hospital, and himself accompanied the patient and family members. At the hospital, they were told that members of the family and neighbors should "get vaccinated and have their toilet covered."[1] No further mention of this case is made in the field notes, hence the correct diagnosis is not known to us.

Since a modern doctor was frequently not seen, diagnosis of disease was often uncertain. More often, major symptoms were described or the disorder was given a local name, for which there is no good English equivalent, such as various kinds of *saang* and *lom*.

Non-contagious disorders. - Among current non-contagious disorders mentioned in the field notes, in replies to questions on surveys, and in some cases observed by the physician, were the following, listed roughly in order of frequency: menstrual disorders, headaches, beriberi, cancer, asthma, eczema, nephritis, and rheumatism.

Accidents. - Accidents which were recorded in field notes include bites of dogs, spiders, leeches and snakes, falls from buffaloes and down ladders, burns, cuts, drowning and poison from drinking kerosene. Among the school children examined,

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1. Field notes, S.S., April 29, 1954.